DOCUMENT RESUME

ED 037 772 CG 005 154

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TITLE The Career Information Center; A Working Model.
INSTITUTION Northeastern Univ., Boston, Mass. Career Information Center.
SPONS AGENCY Office of Education (DHEW), Washington, D.C. Bureau of Research.
REPORT NO OE-26016
PUB DATE 69
GRANT OEG-1-7-068801-0359
NOTE 47p.
AVAILABLE FROM Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (FS5.226:26016, $.30)

EDRS PRICE EDRS Price MF-$0.25 HC Not Available from EDRS.
DESCRIPTORS *Audiovisual Aids, Career Choice, Career Opportunities, Counseling Centers, *Counseling Services, *High School Students, Manuals, *Program Guides, Services, Techniques, *Vocational Counseling

ABSTRACT

Northeastern University has, through its Career Information Center, developed a variety of career information programs and services for junior and senior high school students. The various services developed by the Career Information Center include the following: (1) providing career information services, (2) career assembly programs, (3) career conferences, (4) career radio programs, (5) career tape recording services, (6) career filmstrip services, and (7) career television programs. This pamphlet is a guide to the development and use of the above seven ideas. Each is explained, objectives are given, organization methods are suggested, and techniques for successful results are included. Each of the seven services are thoroughly explained and easily understood. Examples are used in each section. (KJ)

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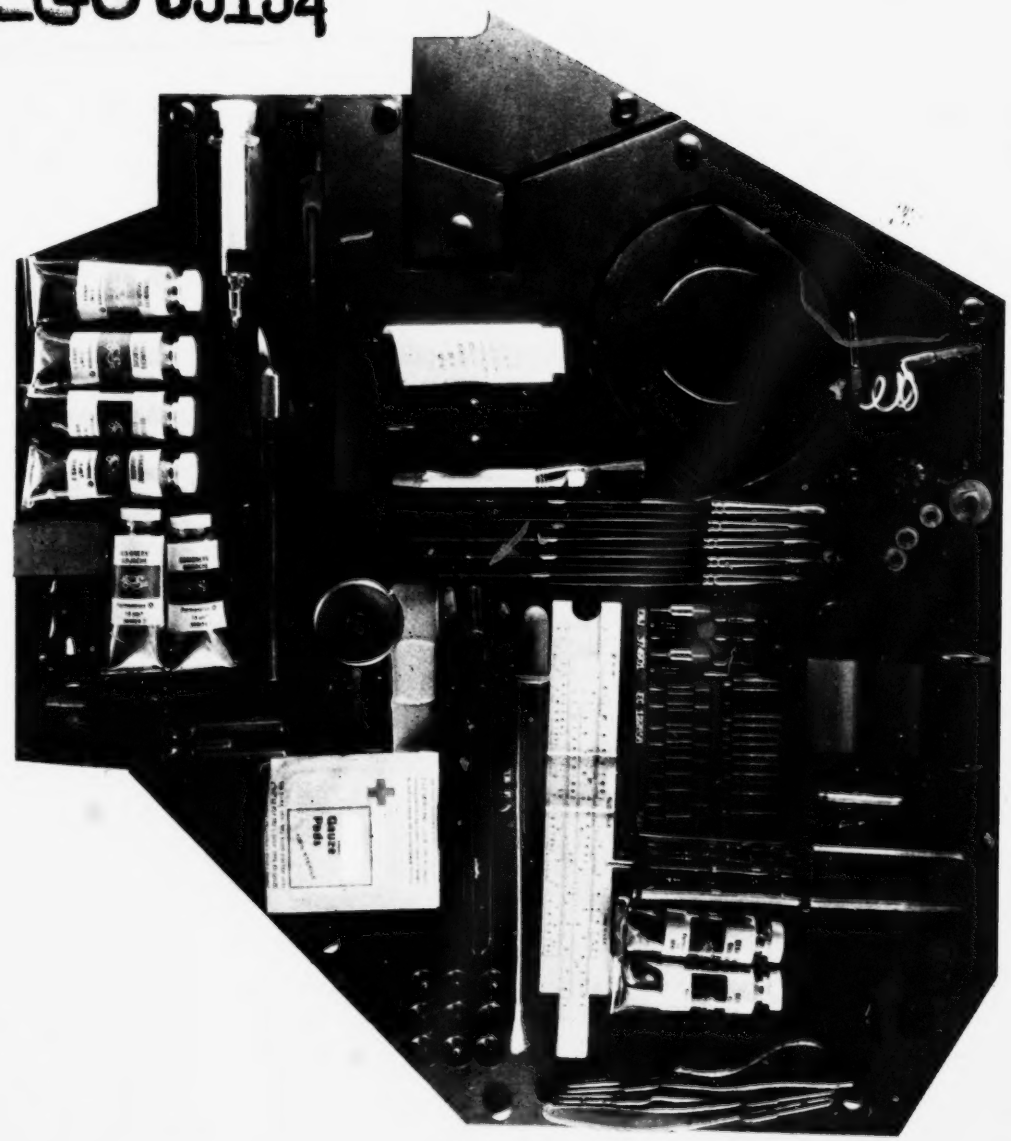

the career information center/a working model

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the career information center a working model

A manual based on the comprehensive experience of the Career Information Center at Northeastern University in Boston, Massachusetts.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Office of Education

Robert H. Finch, *Secretary*

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This publication was prepared under a grant (No. OEG–1–7–068801–0359) from the U.S. Office of Education, Department of Health, Education, and Welfare. Opinions expressed are those of the author and do not necessarily reflect official opinion of the U.S. Office of Education.

Superintendent of Documents Catalog No. FS. 5.226:26016

U.S. GOVERNMENT PRINTING OFFICE
Washington: 1969

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D. C. 20402—Price 30 cents

FOREWORD

Information about careers is an essential ingredient in the process of career choice. Northeastern University, through its Career Information Center, has developed a variety of career information programs and services for junior and senior high school students. Reports of success of these programs have resulted in numerous requests for information about them.

The various services developed by the Career Information Center, include career assemblies for both junior and senior high school students; career conferences; career television and radio programs; career tape recordings; and career filmstrips.

Acknowledgment is made to Roland R. Darling, former Director of the Career Information Center, and his staff who prepared the detailed materials from which this publication was prepared.

Hopefully, the Northeastern University experience will provide a model for schools, colleges, and other groups interested in initiating one or more of the described services.

ROBERT E. PRUITT
Acting Director,
Division of Comprehensive and
Vocational Education Research

CONTENTS

		Page
	FOREWORD	iii
CHAPTER		
1	Providing Career Information Services	1
2	Career Assembly Programs	6
3	Career Conferences	10
4	Career Radio Programs	15
5	Career Tape Recording Services	19
6	Career Filmstrip Services	24
7	Career Television Programs	28
	APPENDIXES	
I	CAREER CONFERENCES	31
II	A GUIDE TO TAPE RECORDINGS	34
III	FILMSTRIPS	36

List of Figures

1. The director of the Career Information Center uses slides to illustrate his talk about careers in a career assembly program....6
2. A speaker at a career conference discusses secretarial work as a career; another speaker discusses data processing as a career....10, 11
3. Career conference posters like this are displayed on school bulletin biards....13
4. Getting together to make a recording on "Applying for College Admissions" are two high school students, two college admissions directors, a program moderator, the station producer, a high school guidance director, and a representative from the Career Information Center....15
5. A senior high school student listens to a tape recording provided by the Career Information Center....19
6. Listening to a recording on "Careers in Nursing," and later discussing careers with the guidance counselor....20
7. A group discussing information from tape recordings on careers in teaching and merchandising....21
8. Students discussing a filmstrip on "How to Survey a Career."....24
9. TV station announcing a series of 13 half-hour programs on careers....29

CHAPTER 1 PROVIDING CAREER INFORMATION SERVICES

"What shall I be after I graduate from high school?" "What career am I best suited for?" "Will there be a job for me when I finish high school?"

These are typical questions which young people today are asking guidance counselors and others who work with youth. Young people face crucial decisions which will exert a tremendous influence on their future. They seek answers, not only to these questions, but to many others as well.

Society has the responsibility to help these young people as they search for answers. New technological developments resulting in changing career patterns, outdated career information, and understaffed guidance departments, all contribute to the problems of career guidance. The unprecedented increase in the school population places an ever-increasing burden on counselors, teachers, administrators, and parents in their efforts to help. They, too, need assistance in obtaining adequate information.

The career information programs and services described in this manual offer a partial solution. They are not intended as a substitute for adequate counseling but, rather, as one means of increasing the efficiency of available resources by supplementing them. Whether schools cooperate with existing centers or develop their own supplementary materials, they should benefit by the experiences at Northeastern.

Development of Services

The career information services described here have been under development at Northeastern University Career Information Center since 1950. Originally, the only services offered were career assemblies presented personally by the director and career conferences coordinated by him. Approximately 30 schools in the Northeast participated in these programs in the early years. Currently, about 80 schools are participating in career conferences alone. (Career assemblies were discontinued in 1968 with the retirement of Roland Darling, the Center's director.) Radio programs were broadcast by a local station for 39 weeks during the 1958–59 school year. These programs were taped and duplicated for distribution to schools requesting them. They were also loaned to other radio stations; 30 schools requested the career tape recordings in 1958. By the time the broadcasts were terminated in 1966, approximately 1,200 schools in the North Atlantic States were using the career tape recordings being produced by the facilities at Northeastern University.

In 1960, the Boston Educational Television Station (WGBH–TV) cooperated with the Career Information Center in producing 13 programs about careers. These were videotaped and made available to other television stations.

In 1961, the Career Information Center began the development of career filmstrips. By 1966, these were being used in approximately 800 area schools.

Cooperation With School Guidance Personnel

Cooperation between the Center and school guidance personnel is an essential factor in planning, developing, and operating career center programs. An advisory committee composed of representatives from all participating schools

assures that programs and services are discussed fully by potential consumers.

A smaller steering committee facilitates the work of the larger advisory committee through preliminary meetings with the Career Information Center staff. Decisions reached by the steering committee are presented at a meeting of the full advisory committee and are reviewed and modified before programs are presented in the schools.

The value of continued communication between the Career Information Center and the schools cannot be overemphasized since it is basic to all of the programs and services provided by the Center.

Support From Participating Agencies

Although these programs were sponsored and coordinated by the Northeastern University Career Information Center, many specialized schools as well as faculty members of other colleges and universities contributed time and energy to present career conferences or served as experts on the career tape recordings. Business and industry representatives responded enthusiastically to the career conferences.

The guiding philosophy of the Career Information Center has been to serve youth rather than to promote a

* * *

Who Can Use the Career Information Center

Guidance counselors	• Guidance counselors use career tape recordings, career filmstrips, career assemblies, and career conferences to help students learn about careers.
Teachers, youth workers, and club advisors	• A variety of adults may use the career filmstrips and other materials to stimulate discussions or answer questions about careers.
Individual students	• In schools where duplicates of the center's recordings are on file, individual students obtain career information by listening to experts being questioned by other students.
Eighth-grade students	• In many junior high schools, career assemblies are presented for eighth-grade students just before they choose their senior high school programs.
Ninth-, tenth-, and eleventh-grade students	• Planned career conferences enable high school students to listen to and question career experts.
Eleventh-grade students	• An annual career assembly is presented in the fall of the junior year when students are encouraged to plan for the future.
General public	• Parents and others seeking help in advising young men and women can consult the center for materials.

particular occupational group or educational institution. It was apparent that many individuals wanted to help. The total list of participating industries, businesses, colleges, and specialized schools has been impressive. The Center has had little difficulty in securing assistance, whether the request was for a speaker to serve three schools on a single career conference tour, an interview for a career tape recording, participation in an advisory filmstrip committee, or participation in a TV career program. Participants volunteered their time and services. Therefore, no copyrights of the materials were needed. This permitted duplication of materials and allowed their free distribution to schools over a wide geographical area.

The Center's successful experience in locating effective speakers for all of its services indicates adult willingness to help youth. If careful advance planning is developed and followed through, other local communities or future centers should enjoy similar success.

Community Development of Programs

Any large city system can probably develop an effective center to serve its own students, but a smaller community may have difficulty in justifying the operation of a center to serve students in other localities. Several small schools can develop effective programs through committee efforts. If a substantial number of schools is to be served, administrative help is needed.

Some national social service agencies, such as the YMCA and B'nai Brith, are concerned with career choices of young people. However, these agencies depend heavily on voluntary contributions to carry on their activities, and it appears unlikely that such agencies could provide continuing financial support for a career center as described in this manual.

Colleges and universities are, therefore, the most likely source for the development of career centers to serve more than a local area. A college or university wishing to establish a career center can consider at least three alternative internal administrative arrangements:

1 The center could function more or less autonomously, being responsible to one top administrative official.

2 The center could be assigned administratively to the admissions department, as it is at Northeastern. This department has the responsibility of maintaining contacts with school counselors, and contributes much to the effectiveness of a career center.

3 The center could be developed through cooperation with a counselor education department if there is one in the institution. Counselor educators are concerned with the training of counselors who are sensitive to the needs of young people as they face career choices. These departments also maintain contacts with local guidance personnel and could further these relationships through the career center.

Financial Support

The Northeastern Center considers it a good policy to keep any proposed career information service free from commercial sponsors. This freedom permits a group to develop services and select speakers acceptable to school counselors. The Center received offers

from outside groups to finance some of its services, particularly the radio series, but rejected the offers because of anticipated complications. Paying participants could immediately raise the question of copyright and might prohibit the Center from encouraging schools to duplicate tapes which are now distributed without charge.

The acceptance of financial assistance in producing some of the filmstrips has been an exception to this general policy. Production costs for filmstrips have been much higher than for any other service. With the concurrence of cooperating groups, the Center established this policy of retaining final responsibility for selecting slides and script materials. When outside groups have contributed, the assistance usually came from an educational foundation associated with the organization.

Financial support is necessary for the staff time involved, especially if a group plans to develop extensive career information services. However, since the presentation of career information is generally accepted as one of the functions of counselors, administrators will usually support the counselor time to be used in these services. Even though many of the services prescribed in this manual can be developed locally, school administrators should be kept informed about the proposed activities and the need for them.

Establishing Contacts To Provide Speakers

Competent speakers are needed for the effective development of any career program or service. Therefore, contacts should be initiated with potential sources, such as the following:

- Professional societies interested in youth guidance and careers.
- Personnel departments of stores, businesses, industries, and hospitals.
- The nearest office of the U.S. Civil Service Commission.
- Admissions and placement offices of nearby colleges, 2-year colleges, technical institutes, and other specialized schools.
- Scientists and engineers in industry and colleges.
- Local banks, insurance companies, airlines, and chambers of commerce.

Once the contact has been made, the development of a good working relationship must be established. The cooperating group will often assign an individual to secure speakers within the professional society, business, industry, or college. This individual needs thorough briefing about the objectives of the service, the role of the speakers, and the characteristics of the student audiences. If this briefing is done properly, the contact person will be able to select appropriate speakers.

Working Relationship With Individual Speakers

The speakers themselves should be well informed. They need information about the date and time of presentation, how to reach the school or schools where they will speak, the counselor's name in each school to be visited, and the specific role of the speaker.

The school counselors also have a major responsibility for developing good working relationships with the speakers. They must be ready to greet them, conduct them to the specific meeting place, and offer them other courtesies,

such as luncheon or coffee. Counselors are also responsible for publicizing the meeting, providing the student audience, and briefing the students in advance in order to make the meeting as effective and helpful as possible.

The same general principles hold true if the program is part of a radio series. Observance of briefing procedures and extension of courtesies will contribute to the speaker's feeling that the program is worthwhile and that he is helping young people with the important process of career choice.

A final but important courtesy should not be overlooked. Since each speaker donates his time and energy, and often interrupts a busy schedule, he should receive a note of thanks for participating.

* * *

In the following chapters, information about six different career information services, as provided by Northeastern University's Career Information Center, will be presented. Some of the services require considerable staff and administrative time, but others require less. Any of the services described can be developed for a small number of schools and then expanded.

Northeastern University officials, early in 1950, believed that a career information specialist, operating from a central location, could provide valuable assistance to guidance departments in the Greater Boston area. The specific services to be offered by the Career Information Center included career assemblies described in this chapter and career conferences described in chapter three.

The career assemblies, covering a broad range of careers, were designed to stimulate students in their career planning.

The career conferences were designed to present specific information to smaller groups of students interested in particular careers. The director of the Center, utilizing contacts with industry and schools, was able to secure experts who were willing to visit schools and talk with interested students. He worked cooperatively with the schools, establishing schedules and then making arrangements with the experts.

What Are Career Assemblies?

Career assemblies are large group meetings, including at least one entire grade within a school. One or two speakers meet with the group to present information about a variety of careers and to answer student questions. The Center has found that one of the most practical and stimulating methods of presenting this information includes some opening remarks by the director

Figure 1. The director of the Career Information Center uses slides to illustrate his talk about careers in a career assembly program.

of the Center to explain the purpose of the assembly and the need for information in student career planning. This is followed by the projection of about 80 slides with commentary by the speakers. Time permitting, the assembly closes with a question-and-answer period. (See figure 1.)

Objectives of the Career Assemblies

Assistance with career assemblies was the first service offered by the Center in 1950. Originally presented in high schools in the Greater Boston area, the service was expanded to junior high schools to meet emerging demands.

More than 80 percent of the high schools use the career assembly for the 11th grade, while the remainder include the 10th, 11th, or 12th grade. Occasionally all high school grades attend.

The program is designed to provide information about a variety of career and educational opportunities after high school. For those planning further education, materials about college admissions, programs, and financial aid are included.

Junior high school assemblies are usually presented just before students will make decisions about their high school programs. A basic objective of these programs is to stimulate and encourage students to learn more about their own abilities and career potentials. Many different careers and their educational requirements are discussed. Students planning for college are urged to seek information about appropriate high school preparation. The need for completing high school as a minimum requirement for most jobs is stressed and various avenues for obtaining education beyond high school are discussed.

General Organization of the Program

The assembly program's organization has gradually evolved into a fairly successful standard presentation. A brief opening statement by the Center director or one of the speakers emphasizes the need for career planning, mentions new and emerging careers, and identifies career opportunities for people with various levels of education. Local developments that create new employment opportunities are also pointed up. The opening portion of the statement is vital in creating interest. It should be fast-moving and include light and humorous comments. It must be carefully prepared so that every student in the audience will find something of value.

The opening comments set the stage for the next portion consisting of 70 to 80 colored slides. These are presented in sequences showing people at work or receiving training for work. Each slide is shown for about 15 seconds and accompanied by appropriate comments. Each speaker makes the comments for an entire sequence consisting of approximately 10 slides. The technique of having two or more speakers usually adds to the audience interest.

The entire assembly program needs to be revised annually to incorporate new developments into the slides and commentary. To keep the material fresh and current, new slides, sequences, and commentary should be introduced as appropriate.

If time permits, the slides are followed by a question-and-answer period. However, the basic organization of the program is flexible enough to allow for variations in available time in different schools. If time is short, the slides can

be followed by a brief closing statement by one of the speakers, or questions can be limited. The basic element in these assemblies is the showing of the slides. The opening and closing statements can easily be tailored to fit the allotted time.

While the same or similar information could probably be provided by the guidance department, an outside speaker seems to arouse more student interest. Such a speaker can supplement the work of the guidance department and stimulate students to investigate new careers and secure additional information for planning and exploring their career options. An outside speaker who encourages students to stay in school seems to have greater impact than familiar school personnel expressing the same idea.

Question Period

If questions are permitted, speakers must be well informed about careers. Reference materials may be useful to have on hand for more detailed answers or followup on questions not answered directly. Students may also be referred to their own guidance office for additional information or, if the speaker knows where the information may be obtained, this can be indicated to the questioner.

Although eighth graders ask a wide variety of questions, certain generalizations may be used successfully. These students tend to realize, more than students did 10 years ago, that traditional careers are changing and that new careers are developing. Junior high students will ask more questions about careers which have received recent publicity; for example, oceanography, meteorology, and space technology. Students also show interest in glamorous careers, such as airline pilot or stewardess, or careers involving nuclear physics.

An assembly speaker needs advance information about the community in which the program is presented because the questions will reflect local conditions. If a majority of the community's high school graduates have always entered college, most of the questions will be related to careers requiring college or graduate work. Speakers should also anticipate some questions asked about careers not illustrated by the slides, even though a wide variety of careers may have been illustrated.

Selecting and Briefing Speakers

Whether the program is presented by a single speaker or a panel, the participants are the key to a successful assembly. Speakers must be knowledgeable, articulate, spontaneous, and able to communicate effectively with the audience. The more experienced they are in appearing before groups of young people, the more effective they are likely to be.

The Northeastern Center has enjoyed wholehearted cooperation from many individuals in college, government, and business. Local guidance counselors can know the interests of their students and often suggest effective speakers.

Advance meetings are needed with the speakers individually before any program is presented so that each speaker knows the kinds of questions likely to be directed to him. He should also have the opportunity to meet the other participants and be informed about the role he will play in the presentation.

Speakers also need information about the schools where the assembly will be

presented, including the general needs of the students and their educational aspirations. It is important also to make speakers aware of the time allotted to the assembly so that they can expect the moderator to intervene whenever their answers are too time-consuming or involved.

Difference Between Junior and Senior High Assemblies

If the same speakers are used in both junior and senior high assemblies, it may be necessary to point out the different outlook and stage of career planning that characterize these two student groups. In general, junior high school students are exploring career possibilities in broader terms than senior high school students, who are more likely to be interested in specific careers.

In any audience, whether junior or senior high school, there will be individuals who have given considerable thought to their future careers and have acquired related information. However, there will be many, even in high school, who have postponed decisions for a variety of reasons. Good assembly programs should help these students realize that the initiative for decisionmaking lies within the individual rather than coming from some outside source.

Examples of topics appropriate for junior high schools include information about broad categories of careers; relationships between interest, aptitude, and career choice; general information about educational requirements; and comments about selection of high school courses. In the senior high schools, more specific material is needed on college admissions procedures, possibilities of post high school education, employment opportunities for high school graduates, and preparation for job interviews.

When Should Assemblies Be Presented?

The different needs of junior and senior high school students influence the time of year for presenting the assembly program. Fall is a better time for senior high students. They can obtain information about college choice and admissions procedures while there is time to utilize these data. Those who are planning to go to work after graduation can use the career information more effectively in job applications or can seek relevant assistance from the guidance department.

Late winter or early spring appears to be the best time for junior high school assembly programs. These students can use the career information to help them choose high school subjects. This is especially important for those students who may not have realized that their tentative career choices require college preparation. Suggestions about additional sources of information seem to stimulate junior high students to make more effective use of the guidance department. Because these students often view the counselor primarily as the agent responsible for making up their high school programs, they may overlook the guidance department's wealth of career information and the opportunity to discuss future plans. Unsolicited comments from junior high school counselors indicate that the assembly program stimulates many students to seek career assistance from the guidance office for the first time.

What Are Career Conferences?

Career conferences, or occupational conferences as they were formerly called by the Northeastern University Career Information Center, are attended by groups of high school students interested in a specific career. Participants meet with an expert in that career field.

As developed by the Center, the series consists of 15 meetings a year, with three meetings on 1 day in each of 5 months. The year's schedule is arranged in advance. The Career Center, working with counselors from all participating schools, establishes the topics, develops a master schedule, obtains speakers, and coordinates the general service.

Attendance is voluntary and is open to students expressing an interest in the particular career to be discussed. Some schools open the conferences to all high school grades, while others may limit attendance to particular grades. If conferences are open to all students, 15 different career fields may be explored through this service during the student's high school education.

Why Career Conferences?

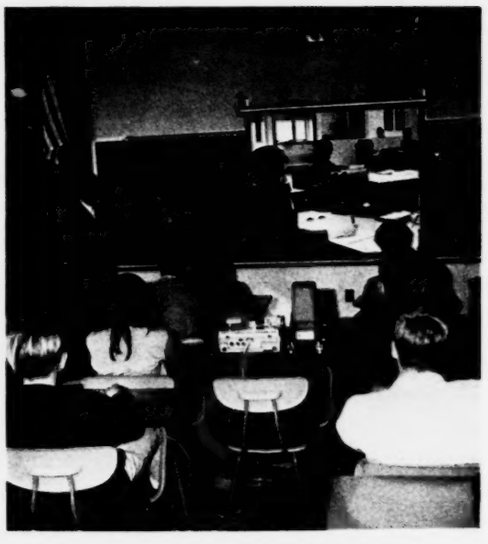
Career conferences were an outgrowth of counselor disenchantment with "Career Days" in the early 1950's. Recognizing the need for students to meet directly with experts in specific fields, a group of guidance directors and the director of the Northeastern Career Information Center explored alternative methods of providing students with career information. They devised a plan for a career assembly program followed by a small number of monthly conferences with experts. This is illustrated in figure 2.

The Sponsoring Group

The ideal sponsoring group is one genuinely interested in helping young people with the challenging task of career choice. One of the most likely sources for this sponsorship is a college or university which has a counselor training program. Administrators of these programs usually are in close communication with school systems in the area because counselors-in-training often do their practice work in these schools. Consequently, such sponsoring groups are likely to be aware of problems local high school students face in making career choices.

However, even without ideal sponsoring-group situations, counselors can still do much on their own to develop effective career conferences. The Northeastern Career Information Center has helped school systems start their own career conferences and expand these

Figure 2. A speaker at a career conference discusses secretarial work as a career (below); another speaker discusses data processing as a career (opposite page).



locally to the point where as many as nine coordinated conferences were held at the same time in a single school. Career conferences can be effectively developed and presented by as many as 12 to 15 schools working together.

The Role of Guidance Counselors

Presenting successful career conferences is a cooperative effort involving guidance counselors, the career center, and the guest speakers. Each group plays an important part in the service.

Following preliminary planning by steering committees, representatives from all participating schools are invited to attend advisory committees meetings to work out final details for the following year's program. If the steering committee has worked out tentative topics for presentation, decisions can be made in a single day.

The usual procedure is for steering committees to review the topics presented for the preceding 3 years. If the number of participating schools is large, they may be divided in two groups. Career topics presented in Group A one year may be selected by Group B the following year. Factors affecting topic choice include general interest by schools in the group and availability of speakers. If interest is sufficiently high, there may be annual presentations of some careers; for example, teaching, engineering, and nursing.

A popular career conference topic is "How to Apply for the First Job." This topic, or another which is closely related, may be presented almost every year. The Northeastern Career Information Center has found that personnel departments in insurance companies or large retail stores can usually supply effective speakers. (See Appendix I for a typical conference schedule.)

Guidance counselors are responsible for indicating the appropriate time of the day and week for conferences to be scheduled in their individual schools.

Publicity for the Conference

The Career Information Center has frequently printed and distributed posters to schools. Separate posters are provided for each month's program, with specific dates and times left blank to be filled in by the individual schools. These posters are placed on bulletin boards 2 to 3 weeks before the conferences.

To supplement the posters, counselors often make announcements over the school public address system several days before meetings. If the topic is pertinent to a particular subject, classroom teachers announce the conference to their classes.

Some schools issue special announcements of their own which are posted on school bulletin boards. (See figure 3.)

Career Center Responsibilities

The coordinating responsibilities of a career information center may be summarized as follows:

1. The center takes the initiative in appointing the steering committees and sets the meeting time for advance planning by this committee. It also arranges the meeting time and place for the advisory committees. These meetings are held in the spring to allow the center enough time to work out conference details for the following school year.
2. The center prepares a master schedule for the entire school year, including dates and times of conferences in participating schools. Names of speakers are included on the schedule as soon as they are determined. Schools usually retain. the same day of the week and the same time of day for these conferences from one year to the next. However, to verify this, forms are mailed to participating schools in the spring, indicating the time presently assigned. Schools are asked to report whether there are unusual circumstances which dictate a change. From the replies, the center then establishes the master schedule.
3. After the advisory committees have chosen the conference topics, the center looks for available speakers. Those who have participated in previous years are usually contacted first. Helpful sources include professional societies, personnel or training directors in industry, and schools or colleges offering specialized training in the career fields chosen. The Northeastern University's Career Information Center has found other schools and colleges highly cooperative. Their faculty members recognize the importance of assisting high school students with career choices and generally participate willingly.

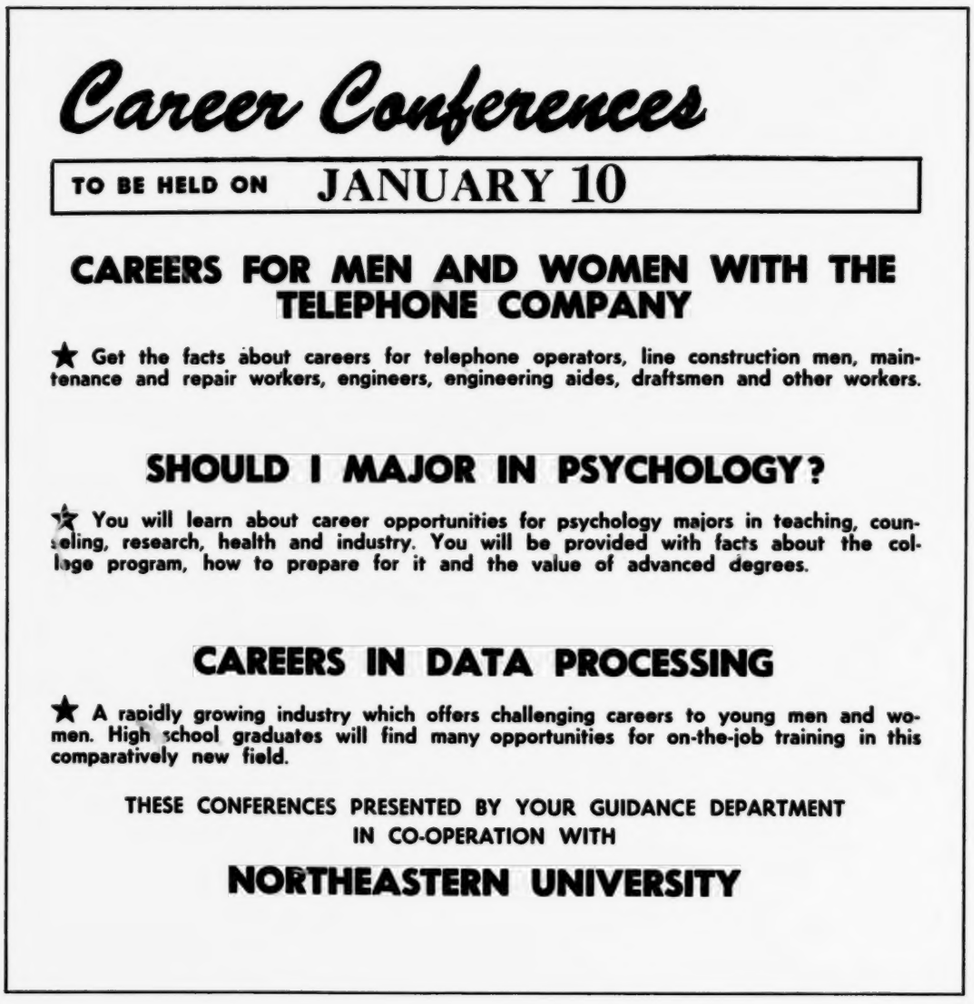
   Each speaker is provided with a "tour sheet" covering schools to be visited on certain days. (See Appendix I for sample.)
4. To develop an appropriate outline of the material to be presented in each conference, the center works with key individuals who will either speak or provide speakers. These outlines are provided to individual schools and speakers in advance of the conference. Speakers are not required to present material exactly as listed, but the outline does give schools and speakers a general frame of reference for the contents of the presentation.
5. Recognizing that some speakers have had no experience in making presentations at these conferences, the center holds a special briefing session in the fall for these who have

indicated a willingness to participate. At this meeting the director of the center, a guidance director, and an experienced conference speaker provide the following information:

(a) *Purpose of career conferences*
Speakers are given a brief history of the development of career conferences, and a complete list of career topics for the schools. The objective of helping high school students with their career choices is emphasized. The need to provide objective career information rather than to recruit for that particular career is stressed.

(b) *Conditions in schools*
The guidance director discusses differences to be expected in school schedules, types of meeting rooms, and methods of screening students for the conferences. He also stresses the need for speakers to be prompt to avoid unnecessary disruption in schools. He encourages speakers to be prepared to use the outline provided by the center or an alternate one of their own.

Figure 3. Career conference posters like this are displayed on school bulletin boards.


Career Conferences
TO BE HELD ON JANUARY 10
CAREERS FOR MEN AND WOMEN WITH THE TELEPHONE COMPANY
★ Get the facts about careers for telephone operators, line construction men, maintenance and repair workers, engineers, engineering aides, draftsmen and other workers.
SHOULD I MAJOR IN PSYCHOLOGY?
★ You will learn about career opportunities for psychology majors in teaching, counseling, research, health and industry. You will be provided with facts about the college program, how to prepare for it and the value of advanced degrees.
CAREERS IN DATA PROCESSING
★ A rapidly growing industry which offers challenging careers to young men and women. High school graduates will find many opportunities for on-the-job training in this comparatively new field.
THESE CONFERENCES PRESENTED BY YOUR GUIDANCE DEPARTMENT
IN CO-OPERATION WITH
NORTHEASTERN UNIVERSITY

(c) *Participant experiences*

Speakers who have taken part in previous conferences provide helpful insights about what can be expected in different schools. This can be reassuring to those who have not participated previously and who may feel somewhat anxious about meeting with a high school audience.

Evaluating Career Conferences

After all programs have been presented, counselors should meet to evaluate them carefully. Included in the evaluation should be comments from students who attended, counselors, and if possible, teachers. A form for obtaining reactions can be worked out in advance. With the resulting information, weaknesses in publicizing, screening student audiences, and making presentations can be corrected.

If a particular conference receives a poor rating from a majority of those reporting, the cause should be determined. The time of year could have affected the rating. The speaker might not have been properly prepared and informed about the objectives, or he might not have been selected with proper care. These and other factors should be considered when making and using the evaluation.

Why the Center Used Commercial Radio

Prior to the inauguration of its career radio broadcasts, the Center had been presenting career assemblies and career conferences in high schools in Eastern Massachusetts. These programs had been enthusiastically received and valuable contacts had been made with well-informed men and women in a variety of occupations. The Career Information Center felt that radio programs could secure a wider listening audience.

Also, programs which could be loaned to other stations would provide the Center with a library of master recordings about careers. Although plans for circulating career tape recordings to schools were in a preliminary stage, it was already recognized that duplicates made from the master recordings could be sent directly to schools if appropriate. (See figure 4.)

How the Plan Was Tested

To test whether it would be practical to use commercial radio stations for the presentation of career information, the director of the Career Information Center obtained the cooperation of a Boston radio station for an experimental series of 13 broadcasts during the spring of 1958. The arrangement was part of the commercial station's public affairs program. Guidance counselors in Greater Boston were informed of the proposed broadcasts, asked to listen, and to make

Figure 4. Getting together to make a recording on *Applying for College Admissions* are two high school students, two college admissions directors, a program moderator, the station producer, a high school guidance director, and a representative from the Career Information Center.

evaluations. The comments of the counselors subsequently indicated the general value of this approach.

Planning the Radio Series

During the summer of 1958, the Career Information Center director conferred with the producer of the public affairs program for WEEI–CBS in Boston. Following this, a preliminary format of the programs and tentative topics for the first 13 broadcasts were developed.

After the station accepted the series, the director contacted guidance directors in 39 high schools near Boston, asking each to accept responsibility for one program. This involved selecting student participants, cooperating with the Center in developing appropriate questions, and serving as a resource person and participant on the program.

To help prepare for the early fall broadcasts, some of the counselors were contacted individually during the summer; the remainder met as a group in October and accepted responsibility for later programs.

WEEI provided air time and the services of the producer and station engineer as well as its studio facilities, all without charge. Following the actual broadcast, the station also gave the master tape recording to the Career Information Center. Guest experts donated their time. The only cost to the center, exclusive of staff time, was the printing and distribution of posters announcing time of broadcast, dates, and topics.

The first two programs were recorded in a high school auditorium filled with students. The third was recorded at an airport. This recording resulted in authentic background sounds, but after evaluation, it was decided to record future programs in the broadcast studio. There, it was easier for the engineer to control sound and voice levels, and recordings were of better quality for duplication.

The station assigned a regular weekly broadcast time for these programs. The 9:30 p.m. Sunday evening schedule was an excellent time for the Boston area, and test surveys by the station indicated a stable and increasing listening audience. Although the programs were developed for high school students, a secondary audience of parents and interested adults made up a substantial portion of those who listened regularly.

The station called the series *The Career Center for Teenagers,* and listed it regularly in the Boston newspapers as a Sunday evening highlight program. The station also made spot announcements from time to time when posters were distributed to schools in the area, listing the time and titles of the specific programs. These posters were sent out well in advance and many schools not only put them on bulletin boards but made program announcements on public address systems each week.

Use of Radio Station Recordings

The station making the recordings is, of course, the primary user. However, the radio station gave the Center each original recording after it was broadcast. Those recordings which covered subjects of general interest were duplicated by the Center and became a part of its library of career recordings.

The Career Information Center has provided other radio stations with recordings for use on the air. In some instances, the programs have been presented by the guidance departments in local high schools. On several stations,

local speakers have been used to supplement the programs by providing information about local employment opportunities.

Selecting Topics for the Broadcast Series

Because the series was to be inaugurated early in the fall, the producer at WEEI and the director of the Career Information Center selected the topics for the first 13 broadcasts. The remaining topics were later chosen at the group meeting of counselors in the early fall. The counselors often discussed the nature and purpose of these broadcasts with their students prior to the director's school visit and were able to select interested students to meet with him when he visited in each school.

Topics for the initial and subsequent series were selected on the basis of the following considerations:

1. Topics reflected the interest of boys or girls. A topic of particular interest to boys was soon followed by one of interest to girls.
2. Many topics were of interest to those who would be seeking employment immediately after high school graduation.
3. Careers requiring a wide variety of post high school education levels were also included. These ranged from occupations requiring a year or less of training to those requiring graduate work.
4. The diverse levels of student career planning were also recognized. For example, some students have tentative choices, while others have well-crystallized plans. plans.
5. Guest experts willing to donate their time for discussion of particular topics were also a factor in program selection.
6. The need for information about various levels of employment within a single career field also affected the choice of topics.

A Workable Format for Radio Programs

Any group planning to present a series of career programs should realize that the final decision about format will be made by the radio station. However, a suitable format seems to consist of students asking questions of experts. Methods of obtaining preliminary lists of questions have been described earlier. Such questioning appears to enable student listeners to identify more readily with the questioner. Although the questions are prepared in advance, the answers are not. This results in greater spontaneity, making the program easier to listen to. The student listener seems to find reassurance in realizing that other students are asking the same kinds of questions that he might ask if given the opportunity.

The length of the program will ultimately be the decision of the radio station. The Career Information Center experience indicates that a 15-minute program can be effective. With one student, one guest expert, and the moderator, a program of this length moves rapidly and sustains listener interest. A 30-minute program was desired by the station and was used throughout the 7 years it broadcast these programs. A program of this length required more individuals to provide voice contrast and hold listener interest. The 30 minutes were often divided roughly into equal sections, the first portion providing information about the job charac-

teristics and the second providing information about educational preparation and training opportunities.

Since many radio stations use programs in a 13-week series, this number may determine the basic plan for selecting topics to be presented. However, additional topics may need to be included to allow the radio station to make desired substitutions.

By the time the Center was invited to do a radio series, it already had a substantial pool of speakers from which participants could be drawn. As the series continued, new speakers were added to the roster. Most speakers had already been participants in assemblies or conferences. When new speakers with specialized knowledge were needed, the Center began its search by asking for suggestions from some of its current contacts.

Radio stations will generally be more interested in programs which include student participants. During the entire 7 years the series was on the air, the Career Information Center used students to ask the questions. Sometimes students alternated in questioning, so that several student participants had an opportunity to take part. Sometimes students who were self-confident and assured spontaneously asked for further clarification of an expert's answer or added additional questions during the program. Cooperating schools took responsibility for selecting their student representatives.

The Northeastern Career Information Center believes that, when the same individual serves as moderator throughout any given series, he will become more effective as the series progresses. Radio stations also prefer to work with the same individual through an entire series. The problem then becomes one of finding a school or college willing to permit an individual the necessary time to serve in this capacity.

The Role of the Producer

The producer is a member of the radio station staff. It is his responsibility to produce a program, or series of programs, of interest to the station's listening audience and within the general policy of the station. He is a helpful consultant, especially concerning program topics and format on which he will have final authority. He will be present in the control room when each program is recorded and will serve as general director for each program.

Why Tape Recordings?

There is general agreement that high school students need accurate and current information about careers. There are many ways in which a tape recording can be used to provide such information. The whole recording or part of it may be used by individual students, or in various classes related to the topic, or to supplement a counseling interview.

Information on tape recordings is relatively easy to keep current. Information that is outdated may be erased and replaced with current information, or a completely new recording may be made to replace the earlier one. (See figure 5.)

Starting and Testing This Service

After each of the 13 radio broadcasts in Boston in the spring of 1958, the station gave the master tape recordings to the Career Information Center. Duplicates of these recordings were made and distributed to schools in Eastern Massachusetts. Guidance counselors were asked to listen to the recordings and to arrange for students to hear them. (See figures 6 and 7.) All were invited to make comments about their potential use. Because of the generally favorable reaction, the Career Information Center made several copies of each of the other programs broadcast during 1958–59. A general plan for distributing the tape recordings on a rotating schedule was worked out in 1959 and the list of schools asking to use them has grown.

Tape Service Today

Under current practice the schools receive 12 tapes a year. These are distributed twice a month with different

Figure 5. A senior high school student listens to a tape recording provided by the Career Information Center.

groups of schools receiving different titles at any given mailing period. In the Center's current 4-year cycle, schools on the list the longest receive the most recent titles. It is also possible for schools to make special requests for tapes which would not be included in the regular mailing schedule. As rapidly as possible, schools are being absorbed into groups so that eventually the cycle will be reduced to 2 years. Although the Center is still distributing some tapes which are more than 5 years old, safeguards have been instituted to insure that the information is current. Each tape is reviewed during the summer months. If a tape is outdated, it is removed from the library.

Schools which have experimented with recordings in assemblies or study halls report that tapes have not been effective with large groups. This supports the Center's original assumption that tape recordings would be most useful with individual students or groups of students sharing some common interest.

Fifteen or 30-Minute Recordings

For 8 years, the career tapes were duplicated from the masters used by the radio station. These recordings were 30 minutes long. In 1965–66, the station discontinued the series, and the Career Information Center decided to experiment with 15-minute recordings made in the recording studio at Northeastern University. Comments from the schools receiving these recordings in 1966–67 indicated almost universal preference for the shorter recordings.

Figure 6. Listening to a recording on *Careers in Nursing* (above), and later discussing careers with the guidance counselor (below).

Making a career tape recording is essentially the same as taping a radio broadcast. If the recording is to be duplicated, the master recording must be made with high quality facilities and equipment. As pointed out earlier, a basic difference between the 30- and the 15-minute program is the number of participants. For its most recent series, the Center used only the moderator and a single guest expert. Another difference in the most recent series was that the moderator also acted as the producer, making decisions about format, topics, and recording procedures. The method of developing the list of questions to be

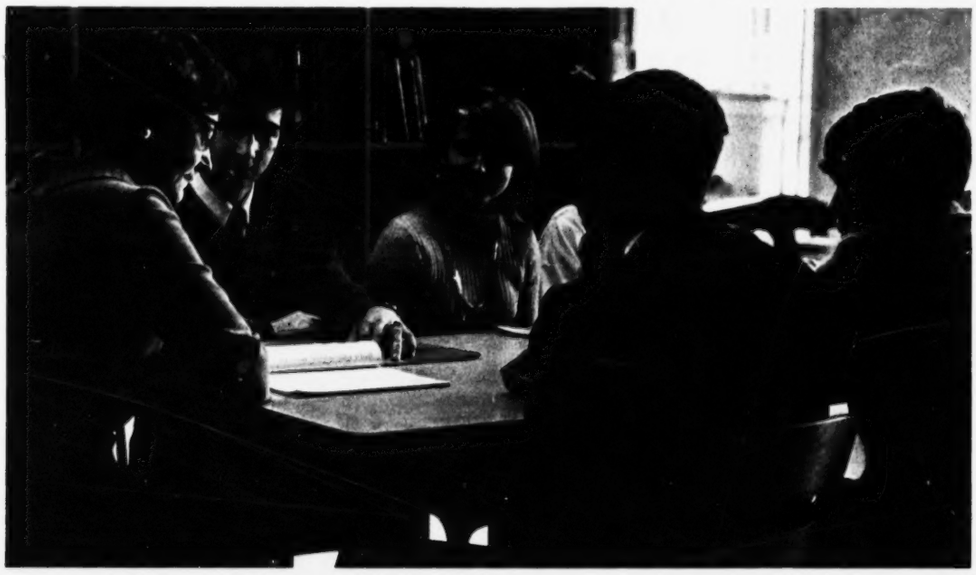


Figure 7. A group discussing information from tape recordings on careers in teaching (above) and merchandising (below).

asked is now the joint responsibility of the Career Center and the guest expert.

The Career Information Center makes arrangements for independent taping as follows:

1. The preliminary list of questions is developed by the Center. About 2 weeks before the tape is made, the list is sent to the guest expert for his suggestions and revisions.
2. Just before the actual recording, the moderator briefs the guest and decisions are made about the order of the questions. No prepared script is used.

Even though the moderator and the guest expert know the order in which the questions will be asked, the moderator aims at a feeling of spontaneity on the recording. During the session, if he decides that a particular answer is too long or possibly unclear, he can then signal the control room to extend the time originally allowed for the recording. The same question can be asked again immediately or at the end of the recording session. The faulty portion is then cut out of the original recording and the new portion spliced in its place. This appears to work better than attempting to record the program a second time.

The list of questions prepared for use on the recording is simply a basic framework. An answer to any particular question may stimulate additional impromptu questions from the moderator. Additional questions may also be asked if the moderator feels clarification of some answer is needed.

Locating Recording Facilities

Facilities of a local radio station are among the best resources for recording. All stations have high fidelity recording equipment and experts in the use of it. If quantity duplication is contemplated, the original tape recording must be made on adequate equipment. It is possible that proper equipment could be found in colleges or even school systems which have good audiovisual departments. If only one school system is to be served, it is possible to produce an adequate recording on a portable tape recorder. However, recordings have been erased inadvertently, thereby losing the results of long and careful planning. Even if a single school is to use the recording, a duplicate should be made and retained by the distribution center. When recordings are played frequently, accidents are bound to happen and the quality is reduced. If the original is used only for making duplicates, the quality will be retained.

Producing a Program

The ideal moderator is a career information specialist with experience in radio broadcasting and interviewing. These characteristics add to the quality of information as well as to the listening interest. While the ideal may be hard to find, the person who serves as moderator should at least be articulate, realize the importance of presenting career information, and be able to make participants feel at ease.

The moderator for the Center's career tape recordings has found it helpful to have an opening question which allows the guest expert to introduce the topic, and a closing question which allows him to summarize. On many of the recordings, the moderator has invited the guest to open with a statement about his day's work, especially if the guest is

employed in the occupation being discussed. This helps to put the guest at ease if he is somewhat nervous. Another helpful technique is to permit the guest to write the answers to the first two or three questions. This is feasible since he will have most of the questions in advance. After reading his answers to these first questions, the guest is usually able to respond spontaneously for the remaining part of the program.

Timing the program is extremely important, especially if the program will be broadcast. Even if it is not, there should be little fluctuation in the timing from one program to another. For a 15-minute program, only about 14 minutes will be used. Sufficient time can then be allowed between the programs placed on one side of the finished tape. Leaders of adequate length can also be spliced to the beginning portion on each side to allow for the inevitable breakage resulting from repeated playing of the recordings.

Evaluating a Program

Each program should be evaluated technically and educationally. The technical evaluation, by either the moderator or the producer, includes the quality of the recording, the timing, and the adequacy of coverage for the list of questions. Occasionally, a program must be rejected or repeated because there are pauses, hesitating or halting answers to questions, poor quality of speaking voice of the expert, or combinations of these which cannot be eliminated by splicing.

Counselors and students should listen to each program, at least the early ones, and make evaluations of listener reaction and accuracy of information. Comments from the group may be used to modify format or improve questions asked. Although early programs may be useable, the continued feedback from consumers contributes to general improvement in later programs.

A Guide to Tape Recordings

An annotated guide sheet may be prepared for each recording which identifies the location of various types of information on the tape. This should improve the usefulness of the recordings for students interested in particular information or for those who wish to review specific parts of the tape. (For an example of an annotation sheet, see Appendix II.)

Development of a Filmstrip Service

The policy of the Northeastern Career Information Center, from the beginning, has always been to assist guidance counselors as they attempt to meet the informational needs of their students. The development of the career filmstrip service resulted from the recognition that, while tape recordings are useful to individual students or small groups with similar interests, they are not always adequate for larger groups of students who are exploring a broader range of career opportunities. Alternative methods of supplying these groups with information appeared to be either career films or career filmstrips. The career filmstrip service resulted from solicitation of counselor preference. (Figure 8 shows students discussing a filmstrip.)

The Center's original filmstrip, entitled *All Kinds of Careers*, was developed around a theme which had been successful in the career assemblies. The first filmstrip showed workers on 50 different jobs. Various companies had already supplied the Center with several hundred 35 mm. colored slides showing workers on the job or in training programs. Because companies had released all the rights to these slides, it was possible to make appropriate selections for the first filmstrip from this library of slides.

The tape-recorded commentary was based on the verbal presentation accompanying the slide-illustrated portion of career assemblies. A suitable script was prepared for each slide and a commentator made the master tape recording.

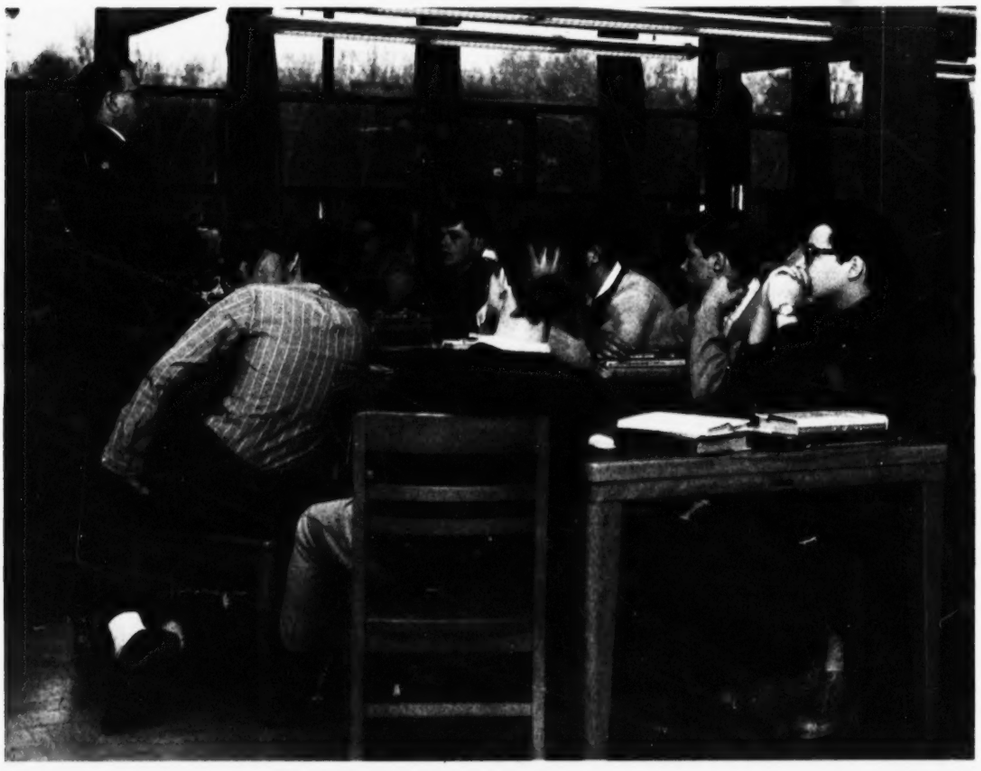


Figure 8. Students discussing a filmstrip on *How to Survey a Career*.

An appropriate audible signal was dubbed onto the tape to enable the school operator to change the projector at the proper time.

The firm that had been providing duplicates of the career tape recordings used the slides and master tape to make 80 copies of the filmstrip and commentary for distribution. (See Appendix III for titles and other information about filmstrips and slides.)

What Is a Career Filmstrip?

Career filmstrips, as produced by the Career Information Center, consist of approximately 80 colored frames accompanied by a recorded commentary running about 20 minutes.

The topic may be broad to provide illustrations about a wide variety of jobs, or it may be directed to a single career field to give information about the range of opportunities within the field. The taped commentary recorded from a written script provides information about the duties, working conditions, educational preparation, and employment opportunities of the individuals shown in the filmstrip.

How To Make a Filmstrip

Area guidance counselors usually determine whether there is a need for particular career filmstrips and participate in planning the proposed service. Counselors know about available information services and can be extremely helpful in suggesting needed filmstrip topics. If the service will be offered to different kinds of schools—for example, urban, suburban, and rural—representatives from such schools should be included.

The Career Information Center has had some success in securing financial sponsorship of several titles. For instance, if a filmstrip is to be loaned to schools in a limited area, a local group might pay for the production costs. But it should be made clear to any sponsors that the objective of a filmstrip is to provide educational and occupational information rather than to promote a particular interest group. The final decision regarding slides and copy should rest with the coordinator rather than with the sponsoring group.

Development of an Experimental Filmstrip

When starting a filmstrip service, an experimental filmstrip may be produced for limited distribution and followed up by evaluation. Assuming that the guidance counselors have been invited to the original planning session, the production might follow these steps:

Choose the title.

Develop a list of jobs to be illustrated.

Write a preliminary script giving information about these jobs.

Develop a list of appropriate slides.

Evaluate the script and list of slides. One or more guidance counselors and experts in the career field may provide the evaluation.

Procure the slides. If these cannot be obtained from outside sources, new photographs may be needed.

Arrange the slides to coincide with the script information.

Project the slides and read the script aloud to check for timing and appropriateness of copy.

Make necessary revisions in the order of the slides, including substitution of slides and changes in script.

Choose the narrator.

Have master filmstrip and tape commentary made.

Make duplicate copies, if desired.

A good topic for an experimental filmstrip might be "All Kinds of Careers," a subject used first by the Northeastern Career Information Center. This permits flexibility according to local interests, can be useful in both junior and senior high schools, and is relatively easy to produce.

Preparing Filmstrips

Originally, 35 mm. slides in the Center's library were used as the primary source. Professional photographers now take specific slides for use in the filmstrips. This has resulted in improved quality. Professionals also make the master tape-recorded commentary. The number of copies of each filmstrip and commentary has been increased to 150, thus enabling the Center to serve the schools currently on the mailing list and allowing for a moderate increase in schools that can be served.

Research on the jobs within a career field should be done prior to the writing of the script. Listing the jobs and grouping them can provide the framework for the desired sequence of the commentary. The written commentary is then used as a basis for determining photo needs.

Script material should be brief and to the point. Each slide will usually be projected for no more than 20 seconds, although varied projection times may be used for different slides. A relatively short projection time will increase viewer interest, give a faster pace to the entire filmstrip, and hold attention better.

Slides may often be obtained from U.S. Government agencies, national headquarters of professional groups, business and industrial associations, and individual firms. They may also be taken by professional or amateur photographers. Professionally made slides generally insure better consistency of color values and photographic quality. However, in the most recent filmstrip produced by the Career Information Center, several slides taken by amateurs were good enough to be used.

Either in photographing workers or selecting from donated slides, it is good practice to show young workers. This enables high school students to identify more readily with the workers.

After refinements are made, the slides and commentary are reviewed by experts before any further steps are taken. For example, the preliminary slides and copy for the filmstrip *Is Engineering for You?* were reviewed by two guidance directors, the dean of an engineering college, a college placement director, and several practicing engineers. Constructive suggestions by the experts can be incorporated at this time, even to the extent of making new slides.

Producing the Master Commentary and Filmstrip

After final agreement is reached on the script, the Center sends it to the audiovisual firm which will produce the copies. A professional radio announcer employed by the firm reads the script and a master recording is produced. Before duplication, the Center reviews this recording in order to suggest any needed changes.

The same procedure is followed after final agreement on the slides. Each slide is projected and technical suggestions for cropping or changing color values are made by the experts in the audio-

visual firm. Three master filmstrips, varying in color intensity, are then made. The Center selects the one for duplication.

Many cities have commercial firms specializing in the production of audio-visual material. Such firms will have a technical staff capable of making suggestions for improving the general quality of the filmstrip. Price quotations may also be obtained for single or multiple copies. Comparison of prices and quality of work offered can then be made.

The firms can probably also act as suppliers for tapes, reels, boxes, and mailing cartons for distribution of filmstrips.

The Distribution Process

As soon as the filmstrip producer feels that the product is nearing the distribution stage, a simple announcement, briefly describing the filmstrip and its possible use, can be sent to schools in the area. Counselors are always seeking additional sources of information for their students. If the filmstrip has been properly planned and prepared, the problem may well be one of keeping the distribution under control rather than seeking additional users.

Keeping the Filmstrip Up To Date

Obsolete career information is worse than useless in schools. Therefore, the filmstrip should be reviewed each year to determine whether new developments have taken place which would make the information incomplete or inaccurate. In its filmstrip *Is Engineering for You?* the Center found it helpful to include some slides which showed workers using equipment that could have different applications. When new developments took place in the engineering field, it was simpler and much less expensive to dub in new copy on the taped commentary than to make a new filmstrip. The Career Information Center estimates that the useful life span of any filmstrip is no more than 5 years, although several titles have been useful for a longer period by changing the taped commentary.

Flexibility of Filmstrip Method

Great flexibility is one advantage of filmstrips in presenting career information. Interest can be developed and maintained even under adverse circumstances. School use is also extremely flexible. Even adults who have seen the various filmstrips report that they find themselves intrigued by this approach.

How TV Differs From Radio

The Career Information Center found that presenting a series of programs on television is quite different from presenting a series on radio. For one thing, the participants on a half-hour radio program agreed on a set of questions and then spent only about 1 hour at the studio. Participants on each TV program had to hold frequent meetings. Equipment to be used in the settings had to be transported to the studio or studio equipment had to be taken to the production site, and a long rehearsal preceded the making of each videotape.

Also, unlike the radio presentation, television programs did not present experts sitting around a table talking with students. The TV station and the cooperating organizations either built sets in the television studio that represented actual working conditions in the fields under discussion, or the workers were seen on their jobs being questioned by students.

As the *Careers in the Electronic Industry* program was telecast, the viewers saw and heard the students questioning an employment manager, a training director in an electronic plant, draftsmen, engineers, engineering technicians, a training school supervisor, and an apprentice. The viewers also saw films and slides depicting operations in industry.

As the *Careers in Teaching* program was televised, the viewers saw the students question a teacher and a student teacher in an elementary school. Then they saw the students visit a senior high school where questions were asked of a teacher. Following these question-and-answer sessions, they saw a college senior being interviewed by a school superintendent, a college professor being interviewed about teaching on the college level, and a college of education admissions officer answering questions about gaining admission to college.

Three months of preparation at the center with frequent conferences at the TV station preceded the making of the first videotape. Meetings were held with numerous cooperating groups which included businesses, education institutions, hospitals, and nursing schools. Figure 9 illustrates the program announcement.

A Typical Program

Certain techniques can be used to simplify production of a TV series. For example, the program on *Careers in Aviation* opened, as did all of the programs in the series, with the moderator talking informally with two high school students about the field to be described. A short film was then shown. It pictured planes arriving and leaving a large airport and three crew members in the cockpit of a plane in flight.

The scene shifted to the crew lounge of a large airline. Pilots, stewardesses, and other crew members were shown playing cards, reading magazines and newspapers, or drinking coffee. In this setting an airline captain, a flight engineer, and a stewardess were interviewed.

On this program as on all others in the series, the moderator and the two students were not shown during the interviews. Their questions were heard as the person who was being interviewed faced the camera.

The next scene was in the corner of an airline maintenance shop, and this was followed by scenes in a ticket office,

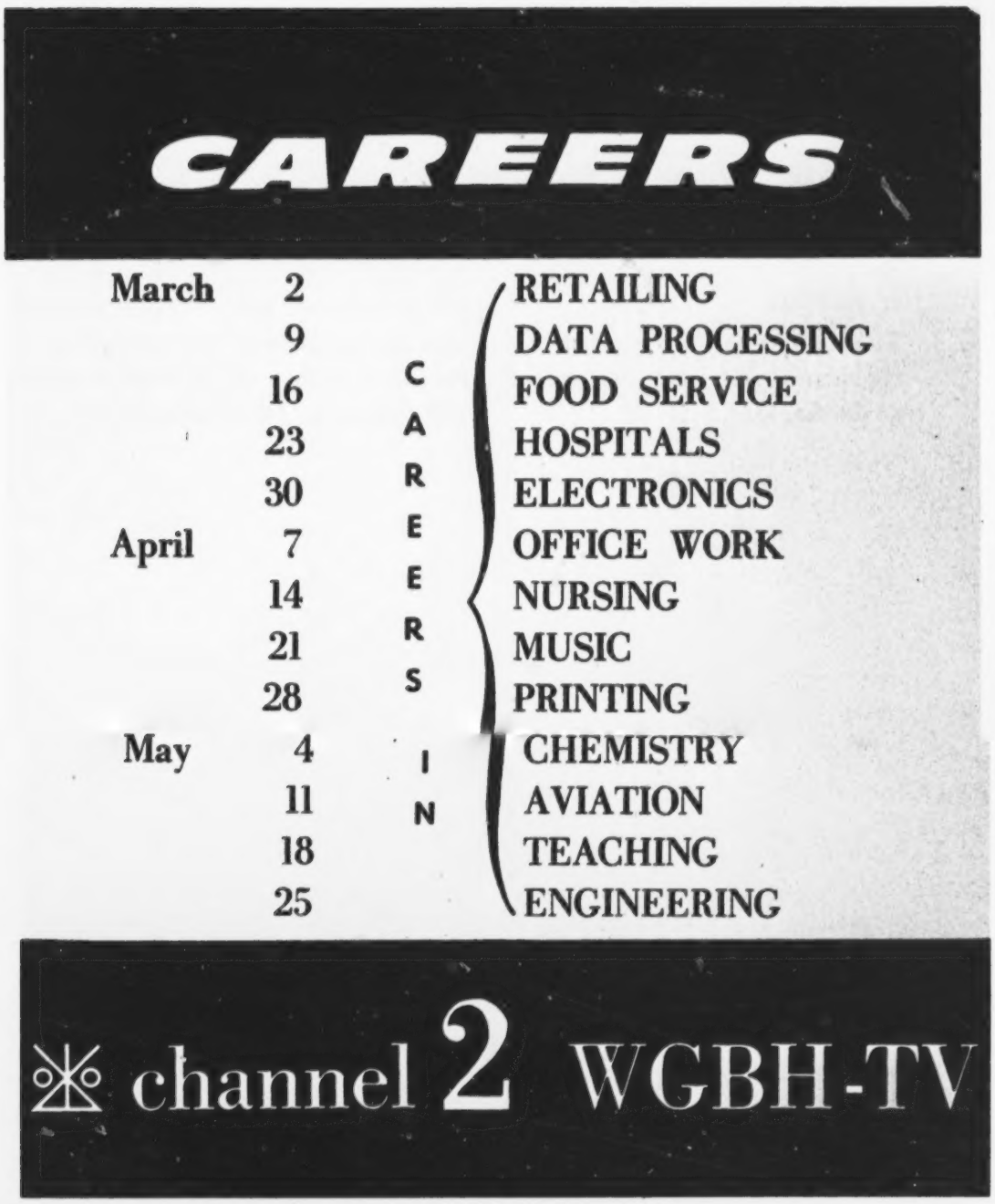


Figure 9. TV station announcing a series of 13 half-hour programs on careers.

a reservation office, and the office of the airline's sales manager. The program closed with the moderator talking with the students as the screen showed planes in flight.

Program Preparation

The following steps were taken in preparation for the *Careers in Aviation* program:

1. The Boston public relations office of a major airline was contacted and subsequently the Career Information Center was advised that the company would cooperate by providing film clips, participants, and materials which could be used to dress up the settings.

2. The representatives of the airline attended a meeting at the broadcasting station where the plans were described to all participating groups.
3. The public relations director conferred with the members of the staff at the Center to develop a set of questions.
4. The week before the program was videotaped, the sets were erected at the studio.

The Changed Situation in Educational TV

When the broadcasting station invited the Center to assist in the production of a series of programs on careers, educational television stations were actively seeking such material. Today, support through various government and foundation agencies, plus competition for available television time, leaves less chance that an individual station will finance a similar series.

Career Conferences

Information Provided to Conference Speakers

Each speaker is provided with a "Tour Sheet" covering each school to be visited on a certain day. Here is a typical sheet:

TOUR SHEET

On *Monday, January 23, 1967* you are scheduled to speak at:

Saugus High School 9:35 a.m. to 10:19 a.m.
Somerville High School 11:17 a.m. to 12:17 p.m.
Waltham High School 1:40 p.m. to 2:25 p.m.

Luncheon will be served at Somerville High School: If you do not plan to have lunch at the high school, please notify the guidance director in advance.

How To Reach These Schools

Saugus High School: As you drive out Route One from Boston, you will pass Sears Roebuck on the left and Saugus High on the right. Leave Route One at the next right, then turn right onto Memorial Drive. The school is located at the end of the drive.

Somerville High School: Return to Route One and head towards Boston. At rotary, turn right onto Broadway (Route One). Continue on Broadway (Route One) to Malden where you turn right onto Route 60 in the center. Turn left onto the Fellsway (Route 28). Continue on the Fellsway into Somerville. After you cross over railroad bridge, turn sharp right. Drive a short distance and at a fork bear left onto Highland Avenue on which the school is located.

Waltham High School: Return to School Street. Continue on this street to Broadway where you will turn left to Route 60. Turn left and drive on 60 through Arlington and Belmont. At junction of 60 and 20 bear right (traffic light). Follow this street a short distance, then turn right onto Lyman Street, turning left onto School Street on which school is located. Park on left side of this street across from school.

Telephone Numbers

Saugus High School 233–4000
Somerville High School 666–5700 ext. 226
Waltham High School 893–8050 ext. 5

Whom Will You Meet?

Saugus High School: John Leahy is the Director of Guidance; Robert Clark, Miss Elizabeth Arribea, and Paul O'Brien are counselors. *Somerville High School:* James J. Noonan is coordinator of Guidance Services; Miss Mildred Nugent, John Gartland, Miss Kathryn A. Kennedy, Robert Healy, John Brennan, and Miss Mary Brown are counselors. *Waltham High School:* Leland H. Chapman is the Director

of Guidance; Miss Margaret M. Nolan is the Assistant to the Director; Miss M. Clare Cunningham, Miss Sarah Giacalone, Miss Jane Graco, Miss Cornelia Sylvester, Lawrence Elliott, Anthony Mrugala, and Miss Judith Mazza are counselors.

Other Facts Which May Help You

Saugus High School: 348 seniors, 322 juniors, 444 sophomores, 3-year school; 55 percent go on to further education

Somerville High School: 550 seniors, 807 juniors, 920 sophomores, 3-year school; 20 percent go on to further education

Waltham High School: 588 seniors, 596 juniors, 640 sophomores, 3-year school; 49 percent go on to further education

If you have any further questions, please contact Mrs. Townsend at Northeastern University.

(OVER)

On the reverse side of this sheet, the speaker is provided with the following:

SUGGESTIONS

During the 1966–67 school year, the Career Information Center is presenting an assembly program and 15 programs about occupations in each high school.

Two other speakers will make each trip with you. Each speaker occupies a room by himself, speaking only to students who have expressed an interest in the subject. The talk is given in one class period.

The length of the class periods varies in the schools. In one school you may be speaking during a 30-minute period; in the next school you may be scheduled to speak for 55 minutes.

You may find that your time schedule on a particular tour is quite tight. If this is so, you will have to leave each school promptly after speaking in order to arrive at the next school on time.

Please notify a high school in advance if you do not intend to have lunch and it is scheduled there for you.

If you are planning to use any type of projection material, such as movies or slides, be sure to let the school know in advance so that arrangements can be made for the proper equipment and the services of an operator to be available.

Before talking in each school, check with the chairman to find out about the bell schedule. There may be some reason why a change has been made without our having been notified.

Encourage questions. Many times speakers have been asked several questions in the first school, a few in the second, and none in the third. This was obviously because their talk had become so detailed that it included the answers to the questions asked in the first school in the second talk, and so on. In order to avoid this development, many speakers place the most important material at the beginning and stop from time to time to ask, "Any questions up to this point?"

If you have any questions regarding these tours, the school, or *the weather*, please call any of the numbers listed below. "No school" announcements are usually broadcast early, over most of the Boston radio stations.

Professor Donald K. Tucker	Home telephone	862–1893 (Lexington)
Mrs. Ruth M. Townsend	Home telephone	665–9172 (Melrose)
Northeastern University	Career Information Center	262–1100 ext. 634

* * *

In addition to the Tour Sheet, each speaker received a copy of the following:

Northeastern University
Career Information Center

To: Speakers who will participate in the series of Career Conferences in the high schools.

About: What happens on the tours.

From: Ruth M. Townsend, Assistant Director

What Is the Average Conference Like?

An average conference is made up of three meetings. Each speaker is usually introduced to his group of students by a student chairman.

Typical Subjects for Career Conferences

Month	*Group A*	*Group B*
October	Career assembly	No programs
November	What's new in ROTC? Why attend a junior or community college? Careers in beauty culture	•Career assembly
December	No programs	Career in chemistry The first job interview Career in dental hygiene
January	Careers in data processing Should I major in psychology? Careers with the telephone	Career in teaching The first job interview Careers in hospital work
February	Civil Service jobs for boys How to prepare for nursing Why attend a college of liberal arts?	Careers in drafting and design Careers in physical education Preparing for careers in radio and television
March	Careers in engineering Careers in office work Why attend a college of business administration?	Careers in art Careers in social work 1-year programs in technical institutes
April	Careers in recreation Careers in the biological sciences Preparing for careers in aviation in 2-year schools	Careers in medical technology Associate degree programs in technical institutes Preparing for careers in business in 2-year schools

A Guide to Tape Recordings

Worcester, Mass., has used tape recordings for several years. The director of guidance developed a booklet which was reproduced and distributed to the junior and senior high schools in the city. The booklet covers about 45 titles which have been duplicated and made available to students in the various guidance offices. On one of the first pages of the booklet, which includes a general description of the service and its possible uses, the following information appears:

> These tape recordings have been annotated to assist in the location of essential information which may be useful to you. To follow the annotation, set the indicator of the tape recorded at 000 at the beginning of the announcer's introduction. When this is done, the following topics will be discussed as the indicator shows the corresponding number on the annotation sheet.

A sample annotation sheet for the recording entitled *How College Will Prepare You for a Career in Education* follows:

The discussion on this recording includes study in a college of education and how it prepares one for teaching. The speakers also discuss the field of education as a profession from kindergarten to secondary level. The information includes certification requirements, practice teaching, admission requirements, financial aid, and the selection of teaching majors.

000 Introduction
055 Colleges offering programs in education
060 Attending a college of liberal arts
069 Entrance requirements for a school of education
080 Preparing to teach at the elementary or secondary level
095 What is meant by student teaching
133 Preparation for kindergarten teaching
143 Student teaching as a certification requirement
149 Elementary teaching
155 Grade levels popular with teachers
159 Preparation for teaching physical education and industrial arts
170 Choosing a teaching program
190 Joining professional organizations
198 Qualifications for teaching more than one subject
210 Preparation for extracurricular work as a teacher
221 Master's degree in education
233 Necessity for doctorate at secondary level
250 Furthering education while teaching
260 Fellowships for financing graduate work
275 Methods of determining teachers' salaries
298 What makes a good teacher
360 Personal satisfaction in education

386 Transferring to education from another department
405 Enrollment in colleges of education
430 Entering the field of guidance
448 What makes a good guidance counselor
480 Teaching in more than one state
495 Scholarships and loans
529 Appraising an applicant
556 Conclusions

Filmstrips

Filmstrips Available to Schools Using the Northeastern Services

The Career Information Center makes 150 copies of each filmstrip for distribution and has 10 different titles available for free loan to schools. Most recently, the Center has begun to produce titles on more specific career fields. The titles currently available are as follows:

All Kinds of Careers
Careers in Health
Surveying a Career
Jobs for High School Graduates
Is Engineering for You?
ROTC
Post High School (nondegree granting) Education and Careers
Careers in Hotel and Motels
Why Attend a College of Liberal Arts?
Careers in the Food Service Industry

A Typical Filmstrip

A filmstrip, *Is Engineering For You?*, contains basic information about engineering. It shows different kinds of engineers at work, illustrates various settings where engineers are employed, and provides information about necessary preparation for engineering. A primary objective is to stimulate young people to seek more knowledge about the career field.

Specific information contained in this filmstrip includes:

* Information about the differences between the responsibilities of scientists and engineers.
* Information about basic engineering specialities.
* An interview with a college admissions director who provided information about necessary high school preparation and admissions procedures in engineering colleges.
* College courses which are generally found in the beginning years of most engineering programs.
* Facts about choosing an engineering speciality after the first or second year of college work.
* Information about graduate study and industry training programs which could lead to further specialization.
* Indepth information about a single engineering speciality. This gives high school students a better idea of how engineers and scientists work together.
* Emphasis on building skills in key high school subjects, such as English, mathematics, and physical sciences.
* Information about opportunities for women in engineering.
* Information about the projected future needs for engineers.

A Guide Sheet for Filmstrips

With each filmstrip, the Center mails the taped commentary and a "Guide Sheet" for use when showing the filmstrip to a group of students. Each school receiving the filmstrip *Is Engineering For You?* is supplied with the following two pages of information.

Page One

How to Use the Recording and Filmstrip

Set the tape recorder at speed 3¾.
The tape has two tracks with the same commentary on each; so you will not have to rewind, and the tape can be started at either end.
This filmstrip and commentary will run approximately 24 minutes.
Set the projector with the first picture focused and in place. The narrator will call for this picture. Thereafter, a bell will ring as a new slide is to be shown.
Please notify us if the tape or filmstrip has been damaged in any way.
Please mail the tape and filmstrip to us after you have had it for one week. To mail, simply reverse the container in which you received the filmstrip and recording. Our address is on the side of the container. Postage is 5 cents for the first pound, and 2 cents for each additional pound, as long as the words LIBRARY RATE appear on the container.

Is Engineering For You?

A Northeastern University Career Information Center Filmstrip and Taped Commentary

This sheet contains Suggestions for the Teacher or Counselor Who is Planning to Present This Program to a Group of Students.

We wish to acknowledge the help provided us by Edward Colbert, Director of Guidance, Watertown Public Schools, and Walter Gutterson, Director of Guidance, Weymouth Public Schools.
We want to thank the U.S. Army Corps of Engineers, Bell Telephone Laboratories, Dow Chemical Company, Raytheon Manufacturing Company, the U.S. Civil Service Commission, the U.S. Naval Shipyard at Portsmouth, I.B.M., and the U.S. Army Map Service for the loan of slides used on this filmstrip.
Mrs. Ruth Townsend and Prof. Donald Tucker, Career Information Center, Northeastern University, 360 Huntington Ave., Boston, Mass. 02115 262-1100.

After Showing the Filmstrip You May Want to Submit Questions Such as the Following:

What are the steps to be taken in preparation for an engineering career?
What high school subjects are important to the boy or girl who is planning to attend a college of engineering?
Why is English important in engineering?
What have you seen engineers doing?
Are there opportunities for women in engineering?
What firms in this area do you think employ engineers?

What are some of the differences between the work of scientists and engineers?

You will no doubt want to develop your own list of questions. These are suggestions.

If some of your students are interested in specific branches of engineering, we have tape recordings on such subjects as:

How College Will Prepare You for Engineering.

What It Is Like to Study Engineering.

Page Two

Outline IS ENGINEERING FOR YOU?

This Northeastern University filmstrip and recorded commentary is intended to inform junior and senior high school students about engineering and how to prepare for engineering careers. It deals with fundamentals and we hope students will be stimulated to seek further information about engineering. In the future we may offer other filmstrips on this subject with more specialized information. This filmstrip contains:

Information about the differences between the responsibilities of scientists and engineers.

Information about the basic engineering majors.

An interview with a college admissions official. He provides facts about high school subjects which are important to high school students interested in engineering, suggests the steps students should take as they seek admission to an engineering college, and provides information about the kinds of students engineering colleges are seeking.

Facts about the first years in engineering college when the students study certain core subjects.

Facts about the choice of engineering majors, and how after they have mastered the core subjects, the students start specializing.

Information about postcollege training which is offered by industry or in graduate school as students seek further specialization.

One engineering area is described in order that the students may see how scientists and engineers work together. Emphasis is placed upon the importance of the students building a good high school foundation in English, mathematics, physics, and chemistry. Questions about women in engineering and the future demand for engineers are answered.

Sources for further information about *Careers in Engineering:*

The Engineers Council for Professional Development, 29 West 39th Street, New York, N. Y., has published several booklets including: *Do I Have an Engineering Aptitude?, Engineering, a Creative Profession?, After High School, What?*

Other organizations which distribute engineering literature to schools include:

American Society of Civil Engineers, 33 West 39th Street, New York, N. Y.

New York Life Insurance Company, 51 Madison Avenue, New York, N. Y.

National Society of Professional Engineers, 1121 15th Street, NW, Washington, D.C.

American Society for Engineering Education, 25 West 39th Street, New York, N. Y.

The tape recording and filmstrip are the property of the Career Information Center at Northeastern University, 360 Huntington Avenue, Boston, Mass. 02115.

A List of Slides and Commentary:

Commentary	*Slides*
RIGHT NOW SOMEONE IS	
—designing a new space vehicle	sketch of world and space vehicle
—preparing food for astronauts	astronaut eating in space vehicle
—helping sick animals	veterinarians and horse
—studying the ocean depths	the Alvin (oceanographic sub)
—helping sick people	radiologist and patient
—locating oil in unusual places	oil rig in Gulf of Mexico
NEW CAREERS ARE DEVELOPING	
—everywhere	sketch of world
—in the sciences	woman scientist in laboratory
—in education	classroom and large group of students
—in office work	interior of large office
—in retailing	interior of large store
—in construction	building under construction
—in the food field	food being served
—in the health field	hospital
NEW DEVELOPMENTS IN EDUCATION	
—degree granting colleges	college campus
—commuter colleges	commuters arrive on a campus
—residential colleges	college dormitory
—forestry and conservation	class in forestry
—art training	class in art school
—beauty culture training	class in beauty culture
—dramatics	class in dramatics
—technical institutes	class in a technical institute
—apprentice training	apprentice on job
—evening colleges	college in city at night
WILL YOU WORK	
—in a hospital?	man and girl in hospital
—in a hotel?	hotel exterior
—in industry?	worker in "clean" room of plant
—out-of-doors?	geologists in Utah
—overseas?	Peace Corps groups at work
—in research?	worker in soundless chamber
—in an office?	accountant at work

LOOK BEHIND THE SCENES IN A FIELD OF WORK—for example, air transportation	
—in the air	commercial jet in flight
—in the cockpit	pilots and crew in cockpit
—in the passenger section	stewardess and passengers
—in maintenance	technicians servicing plane
—in airlines office	reservationist (male and female)
—in back of scenes	plane and everyone related to its flight —crew, weatherman, technicians, reservationists, etc.
LOOK AHEAD	
—new developments all around you	Prudential Building in Boston—Motto in piece of Rock of Gibraltar in Prudential Lobby
—"The future belongs to those who prepare for it"	
—First Occupational Conference	poster with first conference topics
—Second Occupational Conference	workers in one of the careers
—Third Occupational Conference	workers in one of the careers
—Fourth Occupational Conference	workers in one of the careers
—Fifth Occupational Conference	workers in one of the careers
WHAT'S NEW IN A PARTICULAR FIELD	
—Nursing education	
—in practical nursing	practical nurse with patient
—in hospital schools	hospital nursing school
—in junior colleges	group of nurses
—in 4-year degree programs	class in college of nursing
—in specialized advanced instruction	operating room team
CHECKING ON CURRENT WANT ADS	
—today's want ads	young man checking newspaper ads
—for automotive workers	gas station
—for construction workers	carpenter
—in retailing work	sales girls
—in secretarial work	secretary typing
—in drafting	draftsmen
—in biological sciences	scientist in lab
—in medical technology	medical technologist in lab
—in pharmacy	woman pharmacist
—in engineering	civil engineers on highway construction
—in special engineering field	package design engineer

SOMEONE HAS TO	
—wash the dirty windows	window washing crew—Prudential Tower
—do research	researchers working with laser
—build our buildings	construction workers on job
—develop new equipment	working with isotopes in hospital lab
—build our roads	superhighway under construction
—make our false teeth	dental mechanic at work
—serve in armed forces	submarine
CLOSING	
"The future belongs to those who prepare for it"	repeat showing of motto in Prudential Lobby

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U.S. GOVERNMENT PRINTING OFFICE
Division of Public Documents
Washington, D.C. 20402
Official Business

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education / Bureau of Research
OE–26016